

Environmental Fate & Effects Division			
PESTICIDE ENVIRONMENTAL FATE ONE LINE SUMMARY			
TRICLOPYR			
Last Update on October 11, 1996			
[V] = Validated Study		[S] = Supplemental Study [U] = USDA Data	
LOGOUT	Reviewer:	Section Head:	Date:

Common Name:TRICLOPYR

Smiles Code:Cl-c(nc(c1Cl)OCC(=O)O)c(Cl)c1

PC Code # :116001

CAS #:55335-06-3

Caswell #:

Chem. Name :3,5,6-TRICHLORO-2-PYRIDINYLOXYACETIC ACID

Action Type:SYSTEMIC HERBICIDE

Trade Names:Acid is for manufacturing use only; formulated to TEA & BEE  
(Formul'tn):TRIETHYLAMINE SALT (GARLON 3A); BUTOXYETHYL ESTER (TURFLON)

Physical State: Fluffy solid.

Use :CONTROL OF WOODY PLANTS AND BROADLEAF WEEDS ON RIGHTS-OF-WAY  
Patterns :FORESTS, INDUSTRIAL SITES, FENCEROWS, AND LAWNS  
(% Usage) :

Empirical Form: C<sub>7</sub>H<sub>4</sub>Cl<sub>3</sub>NO<sub>3</sub>

Molecular Wgt.: 256.47

Vapor Pressure: 1.26E -6 Torr

Melting Point : 148-150 °C

Boiling Point: 290 °C dec

Log Kow : -0.69

pKa: 2.68 @ °C

Henry's : E Atm. M3/Mol (Measured)

9.66E-10 (calc'd)

Solubility in ...

Comments

Water	4.40E	2	ppm	@25.0 °C
Acetone	9.89E	7	ppm	@25.0 °C
Acetonitrile	E		ppm	@ °C
Benzene	E		ppm	@ °C
Chloroform	0.27E	7	ppm	@25.0 °C
Ethanol	E		ppm	@ °C
Methanol	E		ppm	@ °C
Toluene	E		ppm	@ °C
Xylene	E		ppm	@ °C
1-Octanol	3.07E	7	ppm	@25.0 °C
Hexane	41.00E		ppm	@25.0 °C

Hydrolysis (161-1)

[V] pH 5.0:STABLE (MRID 41879601)

[V] pH 7.0:STABLE " "

[V] pH 9.0:STABLE " "

[ ] pH :

[ ] pH :

[ ] pH :

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Photolysis (161-2, -3, -4)

[V] Water: 8-9 Hrs in natural light (MRID 41732201 & 42411804)  
[S]        : 1.7 days in river water (MRID 417322 & 42411804)  
[ ]        :  
[ ]        :

[ ] Soil : No acceptable data  
[ ] Air :

Aerobic Soil Metabolism (162-1)

[S] 79-361 DAYS @ 15 °C  
[S] < 50 DAYS, in THREE SOILS, @ 25 and 35 °C  
[V] 8 DAYS IN SILT LOAM; 8 DAYS IN SILTY CLAY LOAM SOIL @ 25°C  
[ ] DEGRADATES ARE TCP AND 3,5,6-TRICHLORO-2-METHOXYPYRIDINE  
[ ] (MRID 40346304)  
[ ]  
[ ]

Anaerobic Soil Metabolism (162-2)

[S] 3.5 YEARS  
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Anaerobic Aquatic Metabolism (162-3)

[V] TRICLOPYR BEE DEGRADED TO TRICLOPYR ACID IN <ONE DAY, THEN ACID  
[ ] TRICLOPYR IS STABLE IN TWO SANDY LOAM SOILS @ 25°C (MRID 151967)  
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Aerobic Aquatic Metabolism (162-4)

[V] 142 DAYS IN SILTY CLAY SOIL:WATER SYSTEM @ 24-26°C;  
[ ] ONLY DEGRADATE IS TCP at <5% of applied (MRID 40479101)  
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Soil Partition Coefficient (Kd) (163-1)

[V] ADSORPTION COEFFICIENTS

[V] 0.975 in KALKASDA SAND (% OC 0.73; Koc 134 mL/g)

[V] 0.571 in LONDO SdLm (% OC 2.25; Koc 25 mL/g)

[V] 0.165 in COMMERCE SiLm (% OC 0.67; Koc 25 mL/g)

[V] 0.733 in MAHOUN CLm (% OC 1.38; Koc 53 mL/g)

[ ] (MRID 40749801)

Soil Rf Factors (163-1)

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Laboratory Volatility (163-2)

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Field Volatility (163-3)

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Terrestrial Field Dissipation (164-1)

[ ] Triclopyr acid is not used in any typical end-use product; for  
[ ] dissipation information for TEA salt and BEE ester formulations,  
[ ] please see 116002 and 116004, respectively.

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Aquatic Dissipation (164-2)

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Forestry Dissipation (164-3)

[ ] For information on forestry dissipation, please see 116002 or  
[ ] 116004

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Long-Term Soil Dissipation (164-5)

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Accumulation in Rotational Crops, Confined (165-1)

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Accumulation in Rotational Crops, Field (165-2)

[S] ACCUM. IN LETTUCE, TURNIPS, GREEN BEANS, SOYBEANS, AND WHEAT  
[S] AT CONCS. AS HIGH AS 0.153

Accumulation in Irrigated Crops (165-3)

[ ]  
[ ]

Bioaccumulation in Fish (165-4)

[S] BLUEGILL SUNFISH BCF: EDIBLE 0.03 X; WHOLE 1.08 X  
[ ]

Bioaccumulation in Non-Target Organisms (165-5)

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Ground Water Monitoring, Prospective (166-1)

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Ground Water Monitoring, Small Scale Retrospective (166-2)

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Ground Water Monitoring, Large Scale Retrospective (166-3)

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Ground Water Monitoring, Miscellaneous Data (158.75)

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Field Runoff (167-1)

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Surface Water Monitoring (167-2)

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Spray Drift, Droplet Spectrum (201-1)

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Spray Drift, Field Evaluation (202-1)

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Degradation Products

--> DEGRADATION PRODUCTS:

3,5,6-trichloro-2-pyridinol (TCP) (26% of applied)  
3,5,6-trichloro-2-methoxypyridine (TMP) (8% of applied)  
(MRIDs 40346304 & 92189054)

--> T<sub>1/2</sub> for the trichloropyridinol in various soils ranged from 8 to 279 days; eight soils showed T<sub>1/2</sub> = < 50 days, while 12 soils showed < 90 days.

--> T<sub>1/2</sub> for the methoxypyridine had T<sub>1/2</sub> of about 50 days in two soils.

TCP is very mobile (K<sub>ds</sub> 0.53-1.95 mL/g) MRID 42493901

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Comments

-Dissipation studies, flawed because they were limited to the 0-6" depth, indicated a half-life of 20 days or less.

References: EFGWB Chemical File  
Writer : PJH, MIR, JLM, SKS